Bimekizumab's Synergistic Economic Impact Across Four Indications in France

Michael F. Mørup,[1] Peter McCarthy,[2] Grace Miller,[2] Esther Fabre,[3]

[1]UCB, Copenhagen, Denmark ; [2]Remap Consulting UK Ltd, Macclesfield, Cheshire, UK; [3]UCB, Colombes, France.

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Objective

This analysis evaluates the budget impact of bimekizumab (BKZ) across multiple reimbursed inflammatory indications in France, comparing the synergistic impact of treating multiple diseases with a single therapy (cross-indication approach) versus treating each indication separately (single-indication approach).

Introduction

Psoriasis (PsO), Psoriatic Arthritis (PsA), Axial Spondyloarthritis (AxSpA) and Hidradenitis Suppurativa (HS) are autoimmune diseases driven by the pro-inflammatory IL-17-mediated pathway[1, 2]. Patients diagnosed with one of these diseases are more likely to develop one or more of the other diseases when compared with the general population.

BKZ is a monoclonal IgG1 antibody that selectively inhibits interleukin (IL)17F and IL17A[3]. BKZ is reimbursed in France for PsO, PsA, AxSpA and HS[4].

BKZ is expected to provide a synergistic benefit when used across indications, leading to cost savings. This poster presents a budget impact analysis of PsO, PsA, AxSpA and HS in France, comparing the single-indication and cross-indication treatment approach. To our knowledge, this is the first budget impact analysis to consider a cross-indication approach across these four indications.

Methods

A budget impact model was developed using Microsoft Excel™ to analyse the change in healthcare expenditure and productivity associated with BKZ in France over a 5-year time horizon, from a societal perspective **(Figure 1)**. Two scenarios were compared:

1. **Single-indication approach:** indications are modelled independently and aggregated
2. **Cross-indication approach:** a therapy prescribed to a patient treats all reimbursed indications if a patient presents with two or more of PsO, PsA, AxSpA, or HS

Model inputs and assumptions

- **Target population and usage rates:** Target populations were defined according to the French National Authority for Health (HAS) Transparency Commission's opinions on BKZ use for each reimbursed indication. Patients using BKZ in the model switched from other anti-IL-17 treatments only. Drug usage rates used UCB market forecast estimates and differed between biologic/synthetic (b/ts) DMARD-naive and b/ts-DMARD inadequate response (IR) patients.
- **Comparators and costs:** Comparators included products authorised and reimbursed for use in France for the included indications (**Table 1**). Direct medical costs (drug acquisition [list price], administration, monitoring, adverse events) and indirect costs (lost productivity [**Table 2**]) were considered. The model assumes 100% reimbursement of the list price across indications.
- **Clinical data:** The response probabilities for each treatment were calculated using PASI100 for PsO, ACR50 for PsA, ASAS40 for AxSpA, and HiSCR50 for HS, based on efficacy data from published network meta-analyses (**Table 1**). Patients whose disease fails to respond after 16 weeks on induction progress to the IR population. Serious infections were also included and are based on clinical trial data.
- **Cross-indication approach:** Published rates of concurrent inflammatory diseases[5-10] were applied to the eligible population to estimate the number of patients with concurrent disease (**Table 2**). Patients were assumed to receive a single therapy treating concurrent diseases at the highest reimbursed dose per therapy. Synergies from the cross-indication approach impacts drug-acquisition costs and productivity; administration, monitoring, and adverse event costs remain unchanged.

Results

- Over a 5-year time horizon, BKZ generated cumulative total savings of €95,246,984 in France in the single-indication scenario, driven partly by improved productivity (**Figure 2, Table 3**). In the cross-indication approach, the total cost across all indications with BKZ was reduced by 30.5% relative to the single-indication approach (**Figure 3**).
- When comparing the single-indication and cross-indications approaches, the reduction in cumulative costs was 5% greater with BKZ than with secukinumab, which is reimbursed in similar indications in France (**Figure 4**).

Conclusions

The budget impact with BKZ in France was lower using a cross-indication approach compared with a single-indication approach. This highlights the economic benefits of therapies with multiple reimbursed indications and suggests that single-indication budget impact analyses may overestimate the impact of therapies reimbursed for multiple diseases, which can occur and be treated concurrently.

Summary

The study assessed the **5-year budget impact of bimekizumab** in France across PsO, PsA, AxSpA, and HS, accounting for savings from treating multiple diseases with a single therapy

BKZ introduces cumulative cost savings of **€95.2M over 5 years** and across all four indications

There was a **30.5% reduction** in total costs of BKZ when modelled using the cross-indication vs single-indication approach

BKZ showed a **5% greater cost reduction** in the single versus cross-indication scenario than secukinumab, indicating a greater synergistic cost saving with BKZ

Accounting for the cost savings of treatments targeting multiple diseases may **better reflect real-world budget impact**

Figure 1 Budget impact model structure

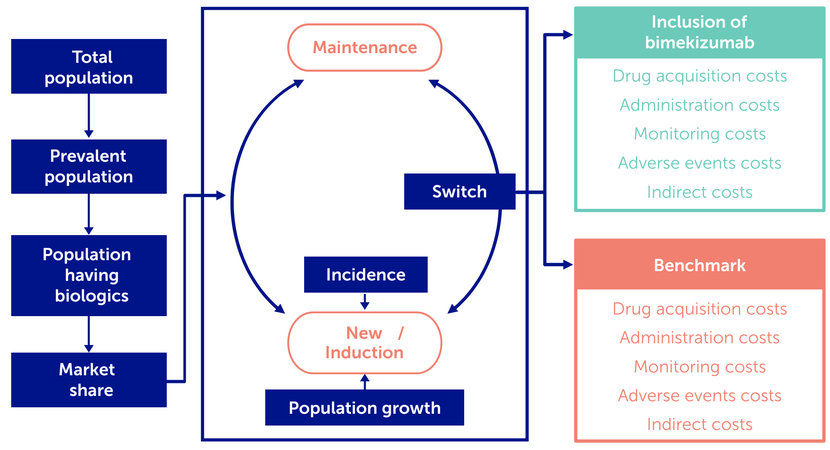


Table 1 Cost and clinical inputs

	Price per pack[a]	Doses per pack	Efficacy rate				
			PsO (PASI100)[11]	PsA (ACR50)[12]	AxSpA[13]		HS[14]
					Ankylosing Spondylitis (ASAS40)	NR-AxSpA (ASAS40)	(HiSCR50)
Bimekizumab 160mg[b]	€ 1,678.8	2	57.8%	41.6%	44.4%	44.2%	56.0%
Adalimumab 40mg	€ 422.3	2	17.6%	26.2%	42.3%	49.7%	50.0%
Adalimumab (biosimilar) 40mg	€ 422.3	2	17.6%	26.2%	42.3%	49.7%	50.0%
Brodalumab 210mg	€ 840.3	2	43.8%	-	-	-	-
Certolizumab pegol 200mg	€ 607.9	2	17.1%	24.9%	44.0%	60.2%	-
Etanercept 50mg	€ 482.0	4	6.3%	28.0%	50.4%	40.7%	-
Etanercept (biosimilar) 50mg	€ 472.7	4	6.3%	28.0%	50.4%	40.7%	-
Golimumab 50mg	€ 543.5	1	-	21.7%	41.9%	50.8%	-
Guselkumab 100mg	€ 1,796.3	1	32.8%	16.2%	-	-	-
Infliximab 100mg	€ 190.4	0.27	-	26.7%	49.9%	44.2%	-
Infliximab (biosimilar) 100mg	€ 190.4	0.27	-	26.7%	49.9%	44.2%	-
Ixekizumab 80mg	€ 877.4	1	38.1%	29.9%	44.4%	44.0%	-
Risankizumab 75mg	€ 2,742.8	2	44.5%	26.5%	-	-	-
Secukinumab 150mg	€ 948.3	2	32.4%	27.1%	41.3%	28.6%	44.0%
Tildrakizumab 100mg	€ 2,198.2	1	13.5%	-	-	-	-
Tofacitinib 5mg	€ 634.3	56	-	24.2%	42.7%	44.2%	-
Ustekinumab 45mg	€ 1,493.1	1	17.8%	20.5%	-	-	-
Ustekinumab (biosimilar) 45mg	€ 1,128.6	1	17.8%	20.5%	-	-	-
Upadacitinib 15mg	€ 626.5	28	-	36.2%	49.4%	39.8%	-

[a]Cost from the payer perspective (Public price including all taxes * reimbursement rate [100%]) + pharmacist fee [€1.02] - discount paid by the patient [€1]), the latest available price from the BdM_IT was used. The list prices include all taxes, as published on April 10, 2025, were used, and based on the assumption that prices will remain constant over the 5 years

[b]The number of doses for BKZ has been adjusted to reflect the indication-specific dosing schedules

Table 2 Cost of lost productivity and comorbidity rates

	PsO	PsA	AxSpA	HS
Annual cost of lost productivity, per patient[c]	€ 5,491	€ 12,250	€ 7,800	€ 1,430

	Comorbidity rate[5-11]			
Primary indication	PsO	PsA	AxSpA	HS
PsO		25.0%	10.3%	3.0%
PsA	85.0%		50.0%	0.0%
AxSpA	20.0%	0.0%		9.0%
HS	15.4%	3.1%	6.8%	

[c]Indirect costs were estimated using the human capital approach and considered the cost sick leave, work stoppage and work disability of patients. They were only applied to non-responders. Additionally, only patients of working age had indirect costs applied to them

Figure 2 Total annual incremental cost savings and cumulative cost savings with BKZ; single-indication approach

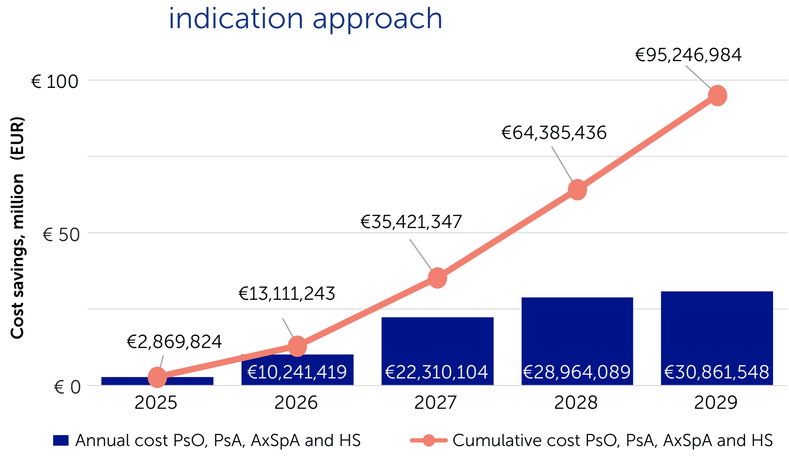


Table 3 Total market costs under different scenarios

		2025	2026	2027	2028	2029
Current practice without BKZ	Single-indication approach	€ 1,562,517,441	€ 1,571,959,044	€ 1,579,757,509	€ 1,589,411,641	€ 1,599,118,897
	Cross-indication approach	€ 1,088,784,101	€ 1,095,358,220	€ 1,100,707,079	€ 1,107,431,549	€ 1,114,197,261
Inclusion of BKZ	Single-indication approach	€ 1,559,647,617	€ 1,561,717,624	€ 1,557,447,406	€ 1,560,447,551	€ 1,568,257,349
	Cross-indication approach	€ 1,088,015,125	€ 1,088,855,294	€ 1,084,689,998	€ 1,086,155,595	€ 1,091,407,075

Figure 3 Total market cost with BKZ; single-indication versus cross-indication approach

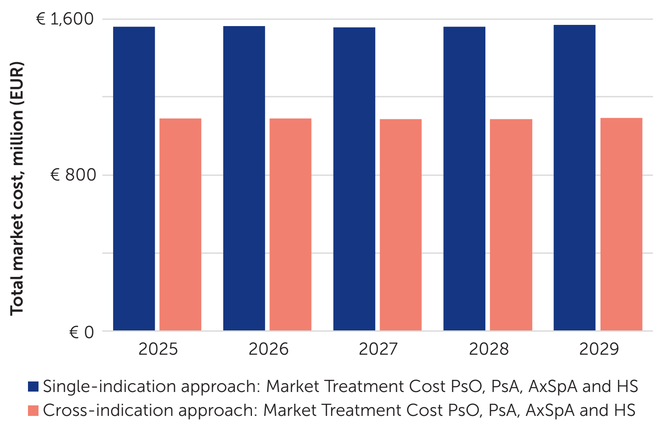
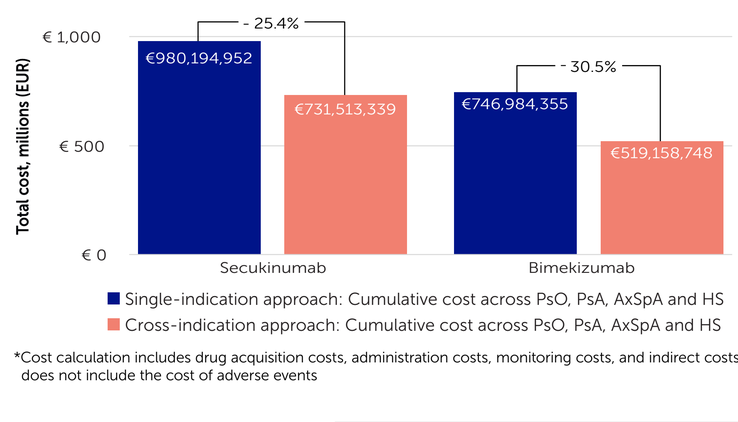


Figure 4 Total cumulative treatment cost of secukinumab and BKZ; single-indication versus cross-indication approach*



*Cost calculation includes drug acquisition costs, administration costs, monitoring costs, and indirect costs. It does not include the cost of adverse events

ACR50: American College of Rheumatology criteria for 50% response; **ASAS40:** Assessment of SpondyloArthritis International Society 40%; **BIM:** Budget impact model; **HAS:** French Health Authority; **HiSCR50:** Hidradenitis Suppurativa Clinical Response 50%; **HS:** Hidradenitis suppurativa; **IL:** Interleukin; **IR:** inadequate response; **PASI:** Psoriasis area and severity index; **PsA:** Psoriatic arthritis; **RWE:** Real-world evidence; **SC:** Subcutaneous

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